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Art Unit: 2188

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1 March 2006
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REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-47 are in this case. Claims 3, 10, 20-21, and 23 have been rejected under § 112, second paragraph. Claims 1-10 have been rejected under § 102(b) or § 103(a). Claims 6-8 have been canceled. Independent claim 1 and dependent claims

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§ 102(b) and § 103(a) Rejections

The Examiner has rejected claims 1-8 under § 102(b) as being anticipated by U.S. Patent No. 6,711,661 to Zabarski et al. The Examiner has rejected claims 9-10 under § 103(a) as being unpatentable over Zabarski et al. The Examiner's rejections are respectfully traversed.

However, while continuing to traverse the Examiner's rejections, the Applicant has, in order to expedite the prosecution, chosen to amend independent claim 1 in order to clarify and emphasize the crucial distinctions between the device of the present invention and the device of the Zabarski et al. patent cited by the Examiner.

Specifically, amended claim 1 now recites that the range boundary information is stored in said memory storage units as logical two-dimensional arrays (TDAs) arranged for a search tree having a plurality of levels, so as to provide an increased rate of the data retrieval from said memory system to said processing logic.

The cited prior art does not teach, nor fairly suggest, the use of logical two-dimensional arrays arranged for a search tree having a plurality of levels. This feature advantageously provides the associative search engine with a highly increased rate of data retrieval from the memory system to the processing logic, which greatly improves search engine performance.

Thus, Applicant believes that the amendments to claim 1 completely overcome the Examiner's rejections on § 102(b) grounds.

Extensive support for these amendments can be found in the Figures, text, and original claims of the Specification, inter alia, in the language of original claim 11.

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New Claims 48-50

New independent claim 48 is largely based, inter alia, on original claims 1 and

11. The definition of "Range", as used in claim 48, is taken from the instant Specification (page 66, lines 2-7):

Regarding Range definitions, a Range is defined as a set of all the integers K that comply with the condition $N_L \leq K < N_H$, where N_L and N_H are two integers such that $0 \leq N_L < N_H$; N_L and N_H are defined as the Range Lower and Upper Boundaries, respectively. The Range definition implies that the Range Lower Boundary N_L is closed and belongs to the Range, whereas the Range Upper Boundary N_H is open does not belong to the Range (or vice versa).

Dependent claim 49 draws support, inter alia, from original claim 11. Dependent claim 50 draws support, inter alia, from original claim 3. Applicant wishes to emphasize that the use of a single boundary value to represent the Range defined in claim 48, is not taught, nor fairly suggested, by the cited prior art, and is highly advantageous with respect to more lengthy and cumbersome range representations known in the art.

In view of the above amendments and remarks it is respectfully submitted that claims 1-5 and 9-50 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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